

## WHAT IS CLAIMED IS:

1. A method for preparation of nanocomposite solution, comprising:

preparing basic silica colloid aqueous solution;

5 providing an electrolysis apparatus by installing a negative electrode containing aluminum and a positive electrode containing silver into the basic silica colloid aqueous solution; and

forming nanocomposite by applying voltage to the  
10 respective electrodes of the electrolysis apparatus.

2. The method for preparation of the nanocomposite solution according to claim 1, wherein temperature when applying the voltage is between 30 and 100°C.

3. The method for preparation of the nanocomposite  
15 solution according to claim 1, wherein content of silica in the basic silica colloid aqueous solution is between 0.1 and 30 weight percentage.

4. The method for preparation of the nanocomposite solution according to claim 1, wherein PH of the basic  
20 silica colloid aqueous solution is between 8 and 12 PH.

5. The method for preparation of the nanocomposite solution according to claim 1, further comprising applying organic solvent to the nanocomposite solution and removing water.

25 6. Nanocomposite solution manufactured according to

the method for preparation of the nanocomposite solution according to claim 1.

7. Nanocomposite solution manufactured according to the method for preparation of the nanocomposite solution according to claim 2.

8. Nanocomposite solution manufactured according to the method for preparation of the nanocomposite solution according to claim 3.

9. Nanocomposite solution manufactured according to the method for preparation of the nanocomposite solution according to claim 4.

10. Nanocomposite solution manufactured according to the method for preparation of the nanocomposite solution according to claim 5.

11. Nanocomposite solution comprising nanocomposite and dispersion media comprising silver particles with size between 1 and 10 nm and silica particles having size between 3 and 50 nm.

12. The Nanocomposite solution according to claim 11, wherein the nanocomposite further comprises aluminum.

13. The Nanocomposite solution according to claim 11, wherein the silver particle and the silica particle are bound to each other.

14. Nanocomposite comprising silver particles having size between 1 and 10 nm and silica particles having size

between 3 and 50 nm.

15. The nanocomposite according to claim 14, wherein the silver particle and the silica particle are bound to each other.

5        16. The nanocomposite according to claim 14, further comprising aluminum.